

REMARKS

In view of the amendments and remarks herein, favorable reconsideration and allowance of this application are respectfully requested. By this Amendment, claim 34 has been amended to avoid "means" language. Claims 1-8, 31 and 34 are pending for further examination. The remaining claims have been withdrawn from further consideration based on the restriction/election.

With respect to the objection to the drawings, Applicant has filed herewith a proposed drawing correction in which "Prior Art" labels have been added to FIGS. 9-13. Approval of the proposed drawing corrections are respectfully requested.

Claims 1, 2, 5 and 31 have been rejected under 35 USC 102(b) as allegedly being anticipated by Bae. Independent claim 34 has been rejected under 35 USC 103 as allegedly being obvious over Bae in view of Jeromin et al. For at least the following reasons, Applicant respectfully contends that these claims are not anticipated or rendered obvious by the cited references. Thus, reconsideration and withdrawal of the rejections are respectfully requested.

Claims 1, 2, 5, 31 and 34 relate to the active matrix substrate (Claims 1, 2 and 5), the method of manufacturing the same (Claim 31), and the image sensor incorporating the same (Claim 34). Independent claims 1, 2, 31 and 34 require (as set forth in these claims) that the pixel circuitry (i.e., the pixel circuitry including the signal line and the storage capacitor electrodes) and the storage capacitor common line in claims 1, 31 and 34) are fabricated from a single electrode layer (i.e., conductive layer)

through patterning thereof. Bae discloses an active matrix substrate having a very different arrangement from that of the claimed invention. According to Figures 8 to 11 of Bae, discussed by the Examiner, at least the active matrix substrate of Bae has a storage capacitor C_{ST} as well as the liquid crystal capacitor C_{LC} . Moreover, the storage capacitor electrodes C3 and C4 are provided in parallel to the data lines DL and formed by patterning at the same time as the source/drain electrodes d1 and d2, which are made of the same material as the data lines DL (see column 6, line 65 to column 7, line 3).

There is nothing in Figures 8 to 11 of Bae corresponding to the storage capacitor common wire as claimed. The member parallel to the signal line (data line) is the storage capacitor electrode, but not the storage capacitor common wire. In short, the storage capacitor electrodes C3 and C4 of Bae are merely patterns, but not wires or lines, because the storage capacitor electrodes C3 and C4 are formed to be distant (spaced) from each other (see Column 6, lines 16 to 19), and are not electrically connected with each other. More specifically, Bae discusses, as prior art, an arrangement in which the common electrode line CL is provided (see Figure 1 and Column 1, lines 50 to 67). Based on this, it is clear that the storage capacitor electrodes C3 and C4 illustrated in Figures 8 to 11 of Bae do not correspond to the storage capacitor common wire, as suggested by the Examiner on page 3 of the Office Action.

Moreover, Bae actually teaches away from the arrangement in which such common electrode lines are provided, as discussed by the Examiner on page 3 of the Office Action. Bae discloses a liquid crystal display device having a small aperture ratio (see column 1, lines 64 and 67). Additionally, the storage

capacitor electrodes C3 and C4 of Bae are very different from the storage capacitor electrodes of these claims in arrangement and function. Specifically, the storage capacitor electrodes C3 and C4 of Bae are respectively connected to the adjacent pixel electrodes so as to capacitively couple storage capacitor electrodes in the adjacent cells with each other (see Column 6, lines 20 to 23). The capacitive coupling of the adjacent pixel electrodes allows the adjacent pixels to partially share charges. Since the data displayed on the adjacent pixels are usually identical, in the case where a defective pixel exists, the display data of the defective pixel is compensated for to some extent (see Column 6, lines 25 to 28, and Column 4, lines 36 and 63).

In contrast, the storage capacitor electrode of the claimed invention constitutes the storage capacitor with the pixel electrode therebetween (see claims 1, 2, 31 and 34). Thus, the storage capacitor electrode of the present invention is not essentially connected with the pixel electrode.

For at least the foregoing reasons, Bae does not teach or suggest the invention defined by any of independent claims 1, 2, 31 or 34. Moreover, Jeromin does not make up for the deficiencies pointed out above with respect to Bae. Thus, reconsideration and withdrawal of the rejection of claims 1-8, 31 and 34 are respectfully requested.

The Examiner alleges that Figure 11 of Bae discloses the arrangement in which the pixel electrode and the storage capacitor electrode C4 are positioned to oppose

each other in a cell, as shown in Figure 11 of Bae.

However, the pixel electrode and storage capacitor electrode of claim 5 are positioned to

oppose each other (e.g., across the insulating film 27 in the contact hole 15), so as to form the storage capacitor. However, in Figure 11 of Bae, the pixel electrode p1 and the storage capacitor electrode C4 are connected within the contact hole. Thus, Applicant respectfully submits that claim 5 is also not anticipated by Bae based on the limitations therein and in its base independent claim. Thus, reconsideration and withdrawal of this rejection are also respectfully requested.

For at least the foregoing reasons, Applicant respectfully submits that the claims as presently presented clearly and patentably distinguish the prior art or record and are in condition for allowance. Thus, withdrawal of the rejections and passage of this case to allowance at an early date are earnestly solicited.

Should the Examiner have any questions regarding this case, or deem that any further issues need to be addressed prior to allowance, the Examiner is invited to call the undersigned attorney at the phone number below.

Respectfully submitted,

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IN THE DRAWINGS

The attached replacement sheets of drawings include changes to Figs. 9-13. The replacement sheets, which includes Figs. 9-13, replaces the original sheets including Figs. 9-13.

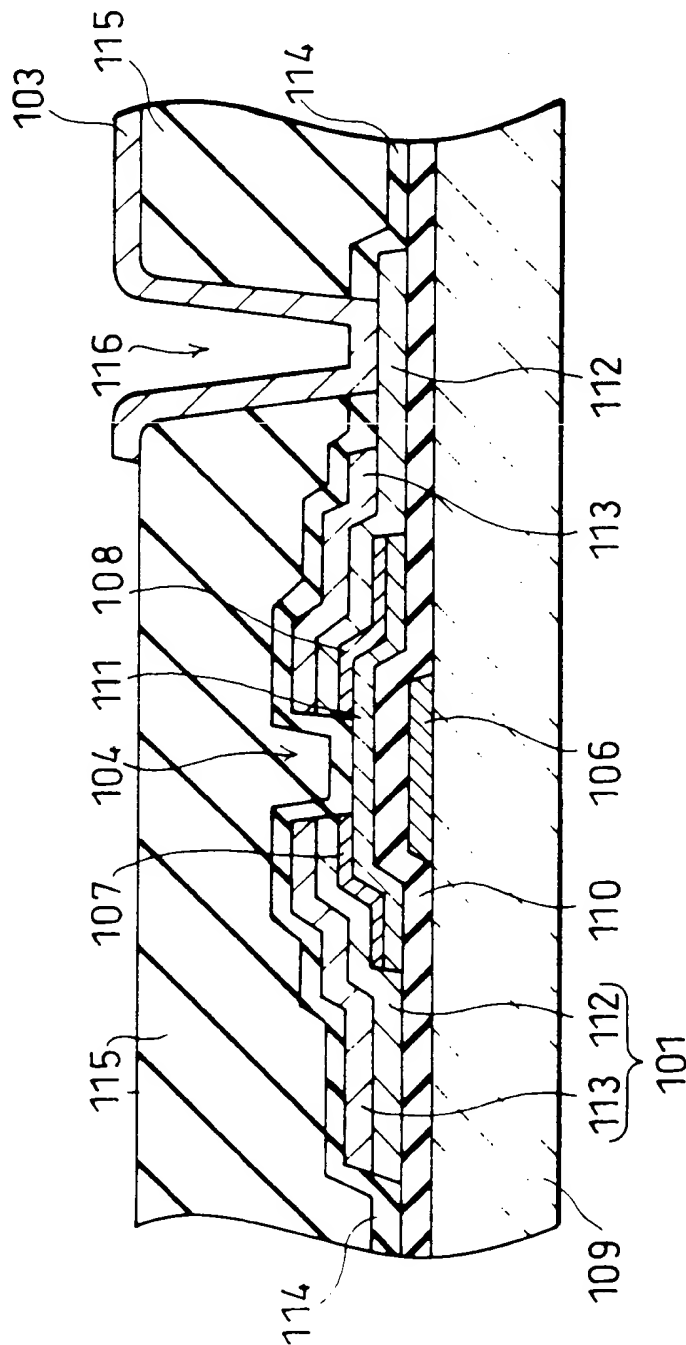
Attachment: Replacement Sheets

Approved
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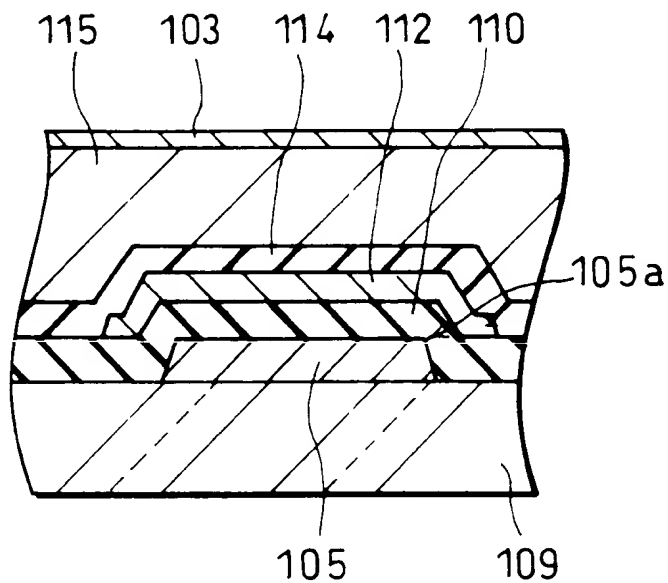
FIG. 10



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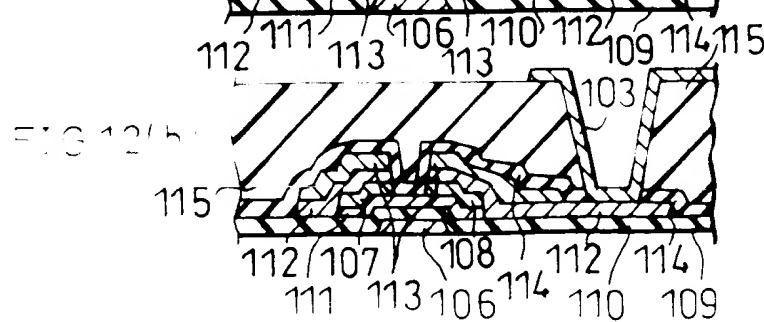
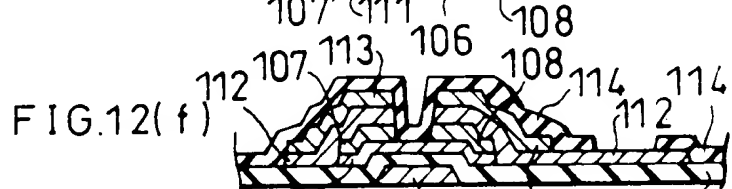
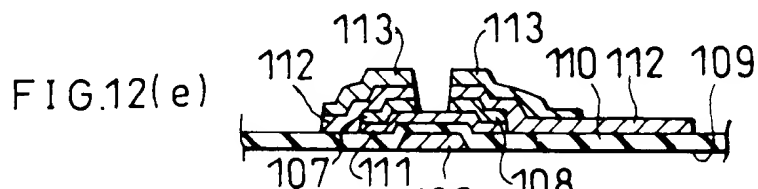
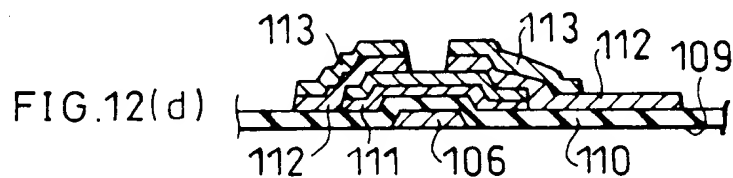
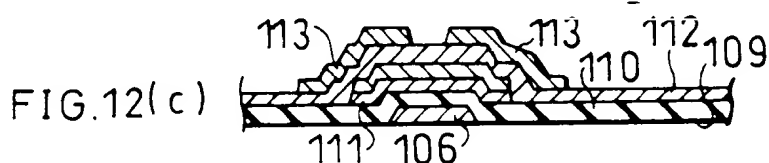
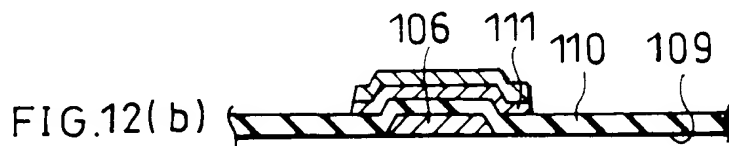
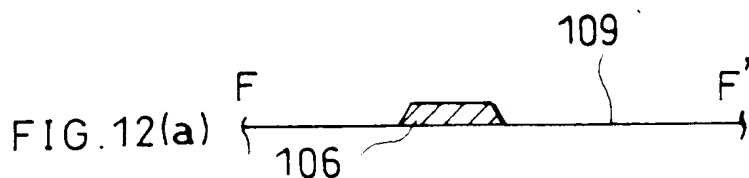
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FIG. 11



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Approved
 [Signature]

